Chapter 1 Test Study Session

① Dot Pattern

Fig 1 Fig 2 Fig 3 Fig 4 Fig 5 Fig 6

a) Draw Figures 5 and 6 above

b) How many dots would be in the 10th figure?

19

c) How many dots would be in the 80th figure?

79

d) What is the rule using n for the Figure Number?

Number of Dots in Figure (n) = $2n - 1$

or

$n + (n-1)$

② Patterns

John sold raffle tickets and got better every day. Here are his numbers:

Day 1: 4 tickets

Day 2: 12 tickets

Day 3: 36 tickets

Day 4: 108 tickets

Continuing with the pattern, which day would he sell more than 1000 tickets?

The rule is multiplying by three.

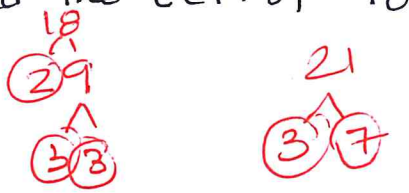
$3(108) = 324$ for Day 5

$3(324) = 972$ for Day 6

$3(972) = 2916$ for Day 7

⑤ LCM

Find the LCM of 18 and 21 $= 2 \cdot 3^2 \cdot 7 = \boxed{126}$

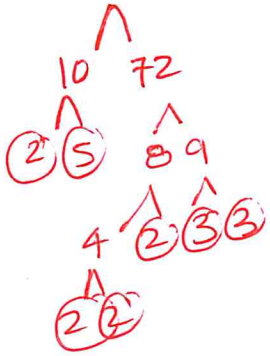


$2 \cdot 3 \cdot 3 \cdot 7 = 126$

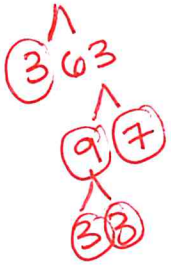
⑥ Prime factorization

Find the prime factorization of:

$720 = 2^4 \cdot 3^2 \cdot 5$



$189 = 3^3 \cdot 7$



⑦ This 3 digit number has a sum of 12 when you add its digits. It rounds to 500. The hundreds digit is twice the ones digit. ~~What~~ What is it? 462

4 or 5

This 3 digit number rounds to 4.2. The product of its digits is 32. The sum of its digits is 13. What is it?

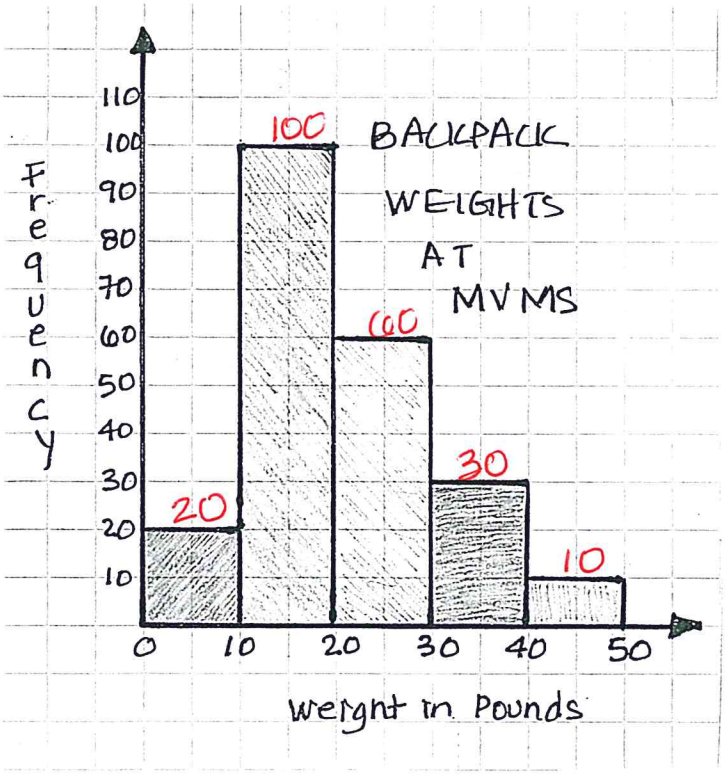
4. — —

4.18

③ Rounding

2.357	to the nearest hundredths	2.36
965.4	to the nearest hundreds	1000
7.4045	to the nearest hundredths	7.40
47.2	to the nearest hundreds	0
823	to the nearest tens	820
3.7112	to the nearest tenths	3.7
2,427,519	to the nearest thousands	2,428,000

④ histogram



① How many backpacks are represented in the histogram? 20+100+60+30+10

220 backpacks

② How many backpacks weighed less than 40 lbs? 220 − 10 = 210

210 backpacks

③ What was the weight of the heaviest backpack?

You can't tell but between 40 & 49 lbs

④ How many backpacks weighed 10 lbs?

You can't tell but but between 0 and 20.